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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/614,369	07/12/2000	David Mun-Hien Choy	AM9-99-0209	2248

7590 06/16/2005

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EXAMINER

WOO, ISAAC M

ART UNIT PAPER NUMBER

2162

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/614,369

Applicant(s)

CHOY ET AL.

Examiner

Isaac M. Woo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-14 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. This office action is in response to the Appeal Brief filed on June 04, 2004.
2. In view of the Appeal Brief filed on June 04, 2004 and response to conference decision, PROSECUTION is hereby reopened.

Drawings

3. The drawings filed on July 12, 2000 are acceptable subject to correction of the informalities indicated on the attached "Notice of Draftperson's Patent Drawing Review," PTO-948. In order to avoid abandonment of this application, corrected formal drawing is required in reply to the Office action. The correction will not be held in abeyance.

Election/Restrictions

4. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143). Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-5, drawn to a system for providing referential integrity for heterogeneous link, RDBMS providing referential integrity for homogenous

links, software layer on top of the RDBMS for causing the RDBMS to provide referential integrity for heterogeneous link, the a software layer maintaining at least one data structure useful in ensuring referential integrity, which is maintaining database schema and database structure for referential integrity, classified in class 707, subclass 100.

II. Claims 5-10, drawn to computer implemented method for preventing dangling points in heterogeneously scoped links, providing at least one heterogeneously scoped link (HSL) table in a non-RDBMS element communicating with at least one RDBMS, at least one table having a heterogeneously scoped link column, the HSL table being associated with the heterogeneously scoped link column, and accessing the HSL table to ensure referential integrity in an RDBMS, which is accessing database and database heterogeneously scoped link table (file) for referential integrity, classified in class 707, subclass 1.

III. Claims 11-14, drawn to computer program product for ensuring referential integrity in an RDBMS having at least one table with at least one column of heterogeneously scoped links, computer readable code means for maintaining a table in a software layer not part of the RDBMS, and computer readable code means for using the table to ensure that operations on tuples in the RDBMS do not result in a heterogeneously scoped link pointing to no tuple, which is generating database and

database structure for heterogeneously scoped link pointing to no tuple,
classified in class 707, subclass 102.

5. The inventions are distinct, each from the other because of the following reasons:

Inventions I, II and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instance case, invention I can be used for providing referential integrity for heterogeneous link, RDBMS providing referential integrity for homogenous links, software layer on top of the RDBMS for causing the RDBMS to provide referential integrity for heterogeneous link, the a software layer maintaining at least one data structure useful in ensuring referential integrity, which is maintaining database schema and database structure for referential integrity. Invention II can be used for preventing dangling points in heterogeneously scoped links, providing at least one heterogeneously scoped link (HSL) table in a non-RDBMS element communicating with at least one RDBMS, at least one table having a heterogeneously scoped link column, the HSL table being associated with the heterogeneously scoped link column, and accessing the HSL table to ensure referential integrity in an RDBMS, which is accessing database and database heterogeneously scoped link table (file) for referential integrity. Invention III can be used for ensuring referential integrity in an RDBMS having at least one table with at least one column of heterogeneously scoped links, computer readable code means for maintaining a table in a software layer not part of the RDBMS, and computer readable code means for using the table to ensure that

operations on tuples in the RDBMS do not result in a heterogeneously scoped link pointing to no tuple, which is generating database and database structure for heterogeneously scoped link pointing to no tuple. See MPEP 806.05(d).

6. Because these inventions are distinct for reasons given above and have acquired separate status in the art as shown their different classification, restriction for examination purpose as indicated is proper.

7. Because these inventions are distinct for the reasons given above and the search required for Group I, II are not required for Group III each other, restriction for examination purposes as indicated is proper.

8. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

9. Applicants are advised that the reply to this requirement to be complete must include an election of the invention to be examined even through the requirement be traversed (37 CFR 1.143).

10. Applicants is reminded that upon the cancellation of claims to be non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48 (b) if one

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or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48 (b) and by the fee required under 37 CFR 1.17 (i).


Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac M. Woo whose telephone number is (571) 272-4043. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IMW
June 13, 2005


SHAHID ALAM
PRIMARY EXAMINER